

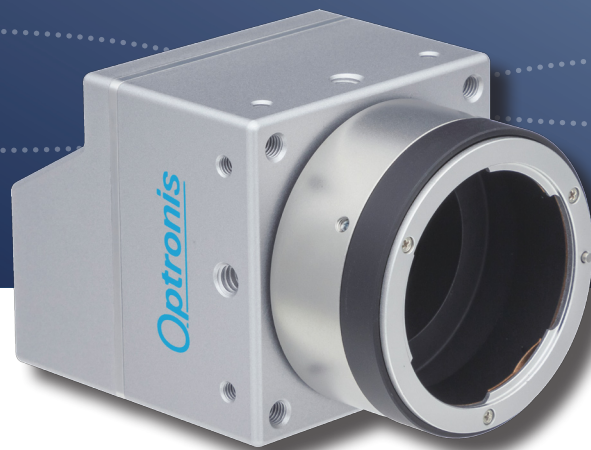
Optronis

Make time visible

CAMPERFORM-CYCLONE SERIES

Cyclone-25-150

High-Speed Machine Vision Camera



CXP-12

- HIGH SPEED MACHINE VISION
- AUTOMATED OPTICAL INSPECTION (AOI)
- SEMICONDUCTOR QUALITY CONTROL

- 150 fps with 5 120 x 5 120 pixels
- Global shutter mode
- Low noise pixel
- CoaXPress V2.0 interface with 4 x 12.5 Gbit/s
- Power and trigger via CoaXPress

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Cyclone-25-150 High-Speed Machine Vision Camera **Optronis**

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FEATURES

Cyclone-25-150 camera provides high resolution images at high frame rate of 150 fps. The camera is part of Optronis CamPerform-Cyclone series for demanding machine vision applications.

- 5 120 x 5 120 pixel resolution
- low noise pixel
- sensor frame rate increases with vertical window size reduction

Firmware features

- Analogue gain and offset adjustment
- Defect pixel correction (customer activatable)
- Dual ROI and Line skipping
- Framenumber and Microsecond counter on image

SPECIFICATIONS

| | |
|--------------------------------|----------------------------------------------------------------|
| Sensor type | GMAX0505, High-Speed, Grade 1 |
| Resolution | 5 120 pixel x 5 120 pixel |
| Frame rate (full resolution) | 20 .. 150 fps |
| Exposure time | 12 µs .. 1 / frame rate |
| Active area / Diagonal | 12.80 mm x 12.80 mm / 18.10 mm |
| Pixel distance | 2.5 µm x 2.5 µm |
| A/D conversion | 8/10 Bit |
| Quantum efficiency (sensor) | 45 % @ 520 nm |
| Synchronization | internal, external, CoaXPress |
| Synchronization signals | Synch IN and Synch OUT, TTL level, electrically isolated |
| Interface | CoaXPress 2.0 (4 ch., CXP-12) Micro-BNC (HD-BNC) connectors |
| Power | 12 W, PoCXP, ext. |
| Temperature Ranges | |
| - operation, amb., no cooling | 0 .. +30°C / 32 .. 82°F |
| - operation, amb., with CY-HIS | 0 .. +40°C / 32 .. 104°F |
| - operation, amb., with CY-FAN | 0 .. +55°C / 32 .. 131°F |
| - operation, case temperature | 0 .. +70°C / 32 .. 158°F |
| Weight | 400 g w/o mount, w/o cooling |
| Dimensions | 65 mm x 65 mm x 71 mm (3D model data available) |

EMVA1288 measurements (v3.1 typ.)

| | |
|----------------------------|-----------------------|
| Dynamic range | 56 dB |
| Saturation capacity | 4 000 e ⁻ |
| Temporal dark noise | 6 e ⁻ |
| System gain | 17 e ⁻ /DN |
| Signal-to-Noise Ratio | 36 dB |
| DSNU | 18 e ⁻ |
| PRNU | 2 % |
| Non-linearity error (v3.0) | 0.6 % |

PERFORMANCE (EXAMPLES, 8 BIT, SEE ALSO FRAME RATE CALCULATOR)

| Resolution (HxV) | Frame rate | Resolution (HxV) | Frame rate |
|------------------|------------|------------------|------------|
| 5 120 x 5 120 | 150 fps | 5 120 x 2 560 | 298 fps |
| 4 096 x 4 096 | 187 fps | 5 120 x 1 280 | 590 fps |
| 3 840 x 2 160 | 353 fps | 5 120 x 640 | 1 152 fps |
| 1 920 x 1 080 | 696 fps | 5 120 x 128 | 4 838 fps |
| 1 280 x 720 | 1 029 fps | 5 120 x 4 | 21 496 fps |

MODELS

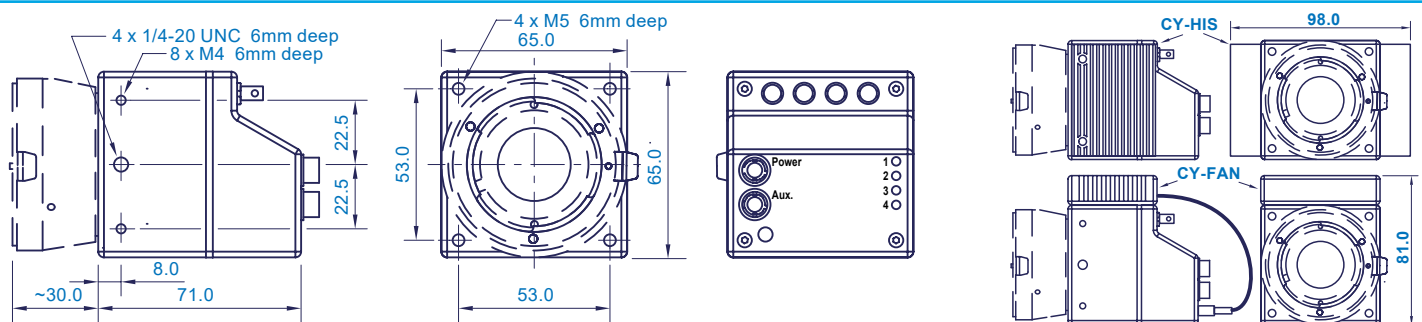
| | |
|-------------------|----------------------------|
| Cyclone-25-150-M | monochrome Camera |
| Cyclone-25-150-C | color Camera |
| Scope of delivery | Camera, brief introduction |

ACCESSORIES

| | |
|----------|--------------------------|
| CY-CM | C-Mount lens adapter |
| CY-FM | F-Mount lens adapter |
| CY-M42 | M42 Mount lens adapter |
| CPH6-PTC | Pig tail cable for synch |
| CPH6-USB | Programming Cable |
| CY-HIS | Heat Sink |
| CY-FAN | Cooling Fan |



TECHNICAL DRAWINGS



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